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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-0691; Project Identifier MCAI-2020-01542-T; Amendment 39-21812; AD 2021-23-14]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bombardier, Inc., Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-100-1A10 airplanes. This AD was prompted by reports of erratic electrical system status on the push button annunciators (PBAs) and the engine instrument and crew alerting system (EICAS). This AD requires revising the existing airplane flight manual (AFM) to incorporate procedures to be applied during erroneous electrical status indication conditions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective January 10, 2022.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of January 10, 2022.

**ADDRESSES:** For service information identified in this final rule, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); internet <https://www.bombardier.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0691.

#### **Examining the AD Docket**

You may examine the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0691; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any

comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-46, dated November 17, 2020 (TCCA AD CF-2020-46) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Bombardier, Inc., Model BD-100-1A10 airplanes. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0691.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model BD-100-1A10 airplanes. The NPRM published in the Federal Register on August 23, 2021 (86 FR 47036). The NPRM was prompted by reports of erratic electrical system status on the PBAs and the EICAS. The NPRM proposed to require revising the existing AFM to incorporate procedures to be applied during erroneous electrical status indication conditions. The FAA is issuing this AD to address erroneous indications that could mislead pilots, causing them to turn off active electrical power sources, leading to partial or complete loss of electrical power. Loss of electrical power could result in the loss of flight displays and reduced controllability of the airplane. See the MCAI for additional background information.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

### **Conclusion**

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

### **Related Service Information Under 1 CFR Part 51**

Bombardier has issued the following sections of the applicable AFMs. This service information provides procedures to inform the pilots not to turn off active generators in the event of an erroneous electrical status indication.

- Section 03-19, Electrical, of Chapter 03, Emergency Procedures, of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, Revision 63, dated April 1, 2021. (For obtaining this section of the Bombardier Challenger

300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.)

- Section 05-19, Electrical, of Chapter 05, Non-Normal Procedures, of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, Revision 63, dated April 1, 2021. (For obtaining this section of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.)
- Section 03-19, Electrical, of Chapter 03, Emergency Procedures, of the Bombardier Challenger 350 Airplane Flight Manual, Publication No. CH 350 AFM, Revision 29, dated April 1, 2021.
- Section 05-19, Electrical, of Chapter 05, Non-Normal Procedures, of the Bombardier Challenger 350 Airplane Flight Manual, Publication No. CH 350 AFM, Revision 29, dated April 1, 2021.

These documents are distinct since they apply to different airplane configurations. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

The FAA estimates that this AD affects 275 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

<b>Estimated Costs for Required Actions</b>			
<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
1 work-hour × \$85 per hour = \$85	\$0	\$85	\$23,375

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:



## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2021-23-14 Bombardier, Inc.:** Amendment 39-21812; Docket No. FAA-2021-0691; Project Identifier MCAI-2020-01542-T.

**(a) Effective Date**

This airworthiness directive (AD) is effective January 10, 2022.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category, serial numbers 20003 and subsequent.

**(d) Subject**

Air Transport Association (ATA) of America Code 24, Electrical power.

**(e) Unsafe Condition**

This AD was prompted by reports of erratic electrical system status on the push button annunciators (PBAs) and the engine instrument and crew alerting system (EICAS), while on-ground and during flight. The FAA is issuing this AD to address erroneous indications that could mislead pilots, causing them to turn off active electrical power sources, leading to partial or complete loss of electrical power. Loss of electrical power could result in the loss of flight displays and reduced controllability of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Revision of the Airplane Flight Manual (AFM)**

Within 60 days after the effective date of this AD: Revise the Emergency Procedures and Non-Normal Procedures sections of the existing AFM to include the information in Section 03-19, Electrical, of Chapter 03, Emergency Procedures, and Section 05-19, Electrical, of Chapter 05, Non-Normal Procedures, of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, Revision 63, dated April 1, 2021 (for airplanes having serial numbers 20003 through 20500 inclusive); or Bombardier Challenger 350 Airplane Flight Manual, Publication No. CH 350 AFM, Revision 29, dated April 1, 2021 (for airplanes having serial numbers 20501 through 20999 inclusive); as applicable.

Note 1 to paragraph (g): For obtaining the sections for Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.

#### **(h) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Section 03-19, Electrical, of Chapter 03, Emergency Procedures, and Section 05-19, Electrical, of Chapter 05, Non-Normal Procedures, of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, Revision 62, dated December 22, 2020; or Bombardier Challenger 350 Airplane Flight Manual, Publication No. CH 350 AFM, Revision 28, dated December 22, 2020; as applicable.

Note 2 to paragraph (h): For obtaining the sections for Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.

#### **(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

#### **(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2020-46, dated November 17, 2020, for related information. This MCAI may be found in the AD docket on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0691.

(2) For more information about this AD, contact Steven Dzierzynski, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7367; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

#### **(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Section 03-19, Electrical, of Chapter 03, Emergency Procedures, of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, Revision 63, dated April 1, 2021.

(ii) Section 03-19, Electrical, of Chapter 03, Emergency Procedures, of the Bombardier Challenger 350 Airplane Flight Manual, Publication No. CH 350 AFM, Revision 29, dated April 1, 2021.

(iii) Section 05-19, Electrical, of Chapter 05, Non-Normal Procedures, of the Bombardier Challenger 300 (Imperial Version) Airplane Flight Manual, Publication No. CSP 100-1, Revision 63, dated April 1, 2021.

(iv) Section 05-19, Electrical, of Chapter 05, Non-Normal Procedures, of the Bombardier Challenger 350 Airplane Flight Manual, Publication No. CH 350 AFM, Revision 29, dated April 1, 2021.

(3) For service information identified in this AD, contact Bombardier, Inc., 200 Côte-Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email [ac.yul@aero.bombardier.com](mailto:ac.yul@aero.bombardier.com); internet <https://www.bombardier.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on November 2, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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